Type 1 (Emergency Maintenance) Changes to Bell Atlantic Systems

1. Either Bell Atlantic or the TC identifies emergency maintenance Change Request (CR).

Who: TC change management organization representative or a Bell Atlantic support group representative, whichever identifies the existence of a production problem

When: To begin a Type 1 (Emergency Maintenance) change

How: Type 1 or Emergency Maintenance changes are implemented in order to fix a discrepancy between the way the production system is functioning and the way it is intended to function as specified in related interface documentation. These discrepancies may be discovered by either TC or Bell Atlantic personnel. Regardless of the source of the discrepancy. That is, the way in which a TC would report a necessary Type 1 or Emergency Maintenance change should mirror the way Bell Atlantic support groups would report it.

The vehicle for TCs to communicate Type 1 changes is the Bell Atlantic Help Desk [*212-587-2669*]. The following information about the production problem should be provided to allow accurate characterization and analysis: user intent, all inputs, all responses, all error messages, and severity. The Help Desk logs the Production problem and notifies the BA Change Control Manager.

Internally, a similar process occurs when a Type 1 change is identified at Bell Atlantic. The BA Support Group that identifies the problem notifies the BA Change Control Manager and provides the same information as requested from the TC.

2. BA Help Desk documents the problem and acts as the interface to other BA support groups.

Who: Bell Atlantic Help Desk and relevant working group members

When: Upon being notified of a Type 1 (Emergency Maintenance) discrepancy

How: The Bell Atlantic Operations Help Desk acts as an interface to the TC reporting the problem. The Help Desk collects all the information described in Step 1 - user intent, inputs, responses and error messages. The Help Desk will seek the assistance of and provide information directly to Bell Atlantic support groups as necessary to address the problem.

3. Performs impact analysis and determines work-around, if any

Who: Various Bell Atlantic and/or TC support groups potentially affected by the maintenance request

When: After being informed of a reported Type 1 (Emergency Maintenance) Change

How: In the case of emergency production maintenance changes, the involved TC or Bell Atlantic support groups analyze the change requests to better understand impact of the reported problem to the extent to which any work-around might impact their business processes and systems.

Depending on the nature of the discrepancy in production, there may be an available work-around. A work-around is a modification to an existing process where alternative procedures or processes can be used to temporarily support the affected business processes utilizing the existing interfaces. For each type of interface, a preferred method for work-arounds will be identified. All parties should be aware that the fallback mechanism for work-arounds, in the event an ordering logical or application data element mapping Type 1 problem is encountered within either Bell Atlantic's OSS Interfaces or a TC's own systems, may be through the use of unstructured "Remarks". To the extent that such utilization could impact flow-through, the Change Control Team may continue to process a Type 1 change after an interim solution is in place.

4. Receive initial feedback on reported problem and finalized work-around

Who: TC change management organization representative(s). In the case where only one TC is affected by the reported problem, it may be appropriate for communications to be limited to Bell Atlantic and that TC.

When: After Bell Atlantic and/or TC support group change request impact assessment

How: After the Bell Atlantic and/or TC support groups have determined the extent of the Change Request impact and potential work-arounds, this information is communicated to parties involved, as appropriate. The communication may be in the form of email or direct phone contact, depending on the severity of the problem (see Type 1 definition for details on severity) and the nature of the information being communicated.

5. BA Internal Change Control Meeting occurs to define requirements and schedule CR release.

Who: Bell Atlantic Change Control Manager and involved Bell Atlantic support groups

When: Pending support group change request impact assessment

How: Requirements for changes to resolve Type 1 (Emergency Maintenance) problems are determined at Bell Atlantic Internal Change Control Meetings. At such a meeting the support groups involved review work-around or stop-gap fixes and identify permanent changes necessary to resolve the problem.

The earliest available release date for fixes related to the maintenance change request is determined by consensus of the involved support groups. Since the circumstances surrounding maintenance change requests can vary widely, the means for reaching this consensus will vary from case to case. In general, the range of factors which the Change Control Manager will consider in determining a release date include:

- Customer and End-User Impact
- Number of support groups affected
- Degree of complexity for the support group changes
- Degree of interaction for the required changes across support groups
- Near term development and release capacities
- Impact upon regularly scheduled enhancements
- FCC Merger Commitments

6. Creates CR in CC DB and obtains CR Tracking Number

Who: Bell Atlantic Change Control Manager

When: Following Bell Atlantic internal change control meeting

How: The Bell Atlantic Change Control Manager enters the information provided by the TC via the Help Desk, any work-arounds determined, all impact analysis results, and the scheduled implementation date, into the internal Bell Atlantic TIS Change Management database and obtains a Change Request Tracking Number. If however, the Type 1 change is a Severity 1 or a Severity 2, this documentation process may be completed at a later date in order to expedite the implementation of the resolution.

7. BA Change Implementation Notification of updated CR and Implementation Date. (Account Manager is copied)

Who: TC change management organization representatives

When: Pending Bell Atlantic change control meeting

How: In the case of Type 1 (Emergency Maintenance) change requests, the Bell Atlantic Change Control Manager communicates the results of the Bell Atlantic Change Control meeting to the TC change management organization representative(s) via email. The two most important results communicated at this time are the resolution (i.e., fix), including any specification, if appropriate and the earliest available fix release date and any available work around. Any impact the release of this maintenance change request may have on regularly schedule enhancements is also discussed.

8. Assesses CR and provides comments (maximum 15 business days)

Who: Various TCs' support organizations

When: After receipt of the change request description

How: It is the TCs' responsibility during this step to review Bell Atlantic's intentions for pursuing the change at hand. Any comments on the proposed Change Request should be forwarded to the Bell Atlantic Change Control Manager via electronic mail within fifteen business days of receipt of the CR. Although the specific review processes will vary from TC to TC, Bell Atlantic seeks to ensure that the following outcomes are achieved by each TC:

- Business process changes are understood throughout the TC's organization
- Application interface changes are reviewed by systems development teams
- New training needs are identified
- Issues and concerns with the proposed change request are documented

9. Final TC Feedback Meeting occurs to review final specifications, testing plans, and confirm implementation date.

Who: All TC change management representatives and Bell Atlantic change control manager

When: After the TC has reviewed the CR.

How: Each TC has the opportunity to review and comment on the proposed CR. This feedback should contain comments on the specifications and implementation date. The TCs' plans for testing the change should also be provided to Bell Atlantic. These testing plans will remain confidential between the individual TC and Bell Atlantic. If TC input is not received in a timely manner at this step of the Type 4 and Type 5 process, it may not be utilized and the CR process may continue.

10. Based on final TC feedback, updates CR as appropriate

Who: Bell Atlantic Change Control Manager

When: Pending feedback from TC support organizations

How: As TCs provide feedback to Bell Atlantic on the proposed change request, this feedback is reflected in the centralized change request. In the event that the proposed change request raises non-trivial issues, this step may involve issue resolution. The Bell Atlantic Change Control Manager will coordinate this issue resolution process, arranging communication or meetings between Bell Atlantic support groups and TC support groups as needed.

11. BA Change Confirmation of Testing Date, Implementation Date, and Decommission Plans. Final specifications are also provided. (Account Manager is copied)

Who: TC change management organization representatives and Bell Atlantic support groups

When: Directly following receipt and synthesis of feedback from all TC support organizations prior to the implementation of the change request

How: The Bell Atlantic Change Control Manager will notify TCs of the scheduled implementation date of the Change Request. This notification includes proxy testing availability, decommissioning plans for the release being replaced and final specifications. The format of this notification provides a short-term view of the upcoming application release schedules.

12. Development and Testing of CR

Who: Bell Atlantic support groups

When: Prior to implementation of change request

How: The required production discrepancy changes are developed by the Bell Atlantic support groups as soon as development capacity permits. Since the nature of production discrepancy changes is normally one of revising a process or application to make it compliant with a previously defined specification, development times are usually not as great as those associated with implementing newly defined functions or processes.

13. Bell Atlantic Internal Verification of Changes

Who: Bell Atlantic TIS Change Control group

When: After release of change request into Bell Atlantic test systems, as appropriate for each change type

How: This step of the Change Management process represents Bell Atlantic's Internal Verification of Changes. The Bell Atlantic TIS Support groups create a suite of test cases and expected results, which are derived from the change requests requirements originally developed. These tests are conducted by the various Bell Atlantic internal support groups responsible for implementing changes. Gaps between the expected results and actual results are resolved by the Bell Atlantic support groups before the change is released into the production environment.

14. Test Suite with Proxy, if nature of change requires or allows.

Who: The TC which is adequately prepared to perform a carrier-to-carrier test.

When: Upon completion of Bell Atlantic Internal Verification of Changes.

How: Prior to BA releasing their changes into the production environment, the change may be checked via TC proxy testing (see Test Suite/Proxy definition), if feasible. This type of testing is meant to mimic as closely as possible the application-to-application interfaces existing in the production environment. The extent to which TC proxy testing is required is evaluated on a case-by-case basis. However, in the case of Type 1 (Emergency Maintenance) changes there will not be extensive TC proxy testing. This type of change request is by definition a change needed to bring the application-to-application interface into compliance with a previously established set of criteria, which should therefore be well understood by all parties involved. In addition, this type of change generally needs to be placed into production quickly, and the tradeoff inherent in reducing TC proxy testing is generally outweighed by the accompanying quickness to deployment.

15. Upon successful completion of test suite, Implementation of CR and Decommission of Outdated Functionality.

Who: Bell Atlantic Information Systems support organization

When: Scheduled change request release date

How: The implementation of system changes involving a TC to Bell Atlantic application interface occurs on the scheduled release date. For Type 1 changes, the outdated functionality is also immediately decommissioned, leaving the new error-free release in existence.

16. Close CR.

Who: All TC change management representatives and Bell Atlantic change control manager

When: Within 30 days after the implementation of the CR.

How: As the TCs review and test the implemented change, they will communicate any problems encountered to Bell Atlantic. These problems will be handled as a Type 1 change if they are a result of erroneous specifications or business rules. If, however, the discrepancy is due to a difference in interpretation of the specifications or business rules that was not encountered during the TC Proxy Test, the issue will be handled on a case-by-case basis. If no TCs have raised issues with the change 30 days after the implementation date, the CR will be closed.

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Type 1 (Emergency Maintenance) Changes to TC Systems

1. Either Bell Atlantic or the TC identifies emergency maintenance Change Request (CR).

Who: TC change management organization representative or a Bell Atlantic support group representative, whichever identifies the existence of a production problem

When: To begin a Type 1 (Emergency Maintenance) change

How: Type 1 or Emergency Maintenance changes are implemented in order to fix a discrepancy between the way the production system is functioning and the way it is intended to function as specified in related interface documentation. These discrepancies may be discovered by either TC or Bell Atlantic personnel. Regardless of the source of the discrepancy. That is, the way in which a TC would report a necessary Type 1 or Emergency Maintenance change should mirror the way Bell Atlantic support groups would report it.

The vehicle for TCs to communicate Type 1 changes is the Bell Atlantic Help Desk [*212-587-2669*]. A brief description of the problem, and any contact names and numbers should be provided. The BA Help Desk will ensure that the BA Change Control Manager is notified of the problem.

Internally, a similar process occurs when a Type 1 change is identified at Bell Atlantic. The BA Support Group that identifies the problem notifies the BA Change Control Manager and provides the same information as requested from the TC.

2. BA Help Desk documents the problem and acts as the interface to other BA support groups.

Who: Bell Atlantic Help Desk and relevant working group members

When: Upon being notified of a Type 1 (Emergency Maintenance) discrepancy

How: Due to the critical nature of this kind of change, the Bell Atlantic Operations Help Desk acts as an interface to the TC reporting the problem. The Help Desk will seek the assistance of and provide information directly to Bell Atlantic support groups as necessary to address the problem.

3. Performs impact analysis and determines work-around, if any

Who: Various Bell Atlantic and/or TC support groups potentially affected by the maintenance request

When: After being informed of a reported Type 1 (Emergency Maintenance) Change

How: In the case of emergency production maintenance changes, the involved TC or Bell Atlantic support groups analyze the change requests to better understand impact of the reported problem the extent to which any work-around might impact their business processes and systems.

Depending on the nature of the discrepancy in production, there may be an available work-around. A work-around is a modification to an existing process where alternative procedures or processes can be used to temporarily support the affected business processes utilizing the existing interfaces. For each type of interface, a preferred method for work-arounds will be identified. All parties should be aware that the fallback mechanism for work-arounds, in the event an ordering logical or application data element mapping Type 1 problem is encountered within either Bell Atlantic's OSS Interfaces or a TC's own systems, may be through the use of unstructured "Remarks". To the extent that such utilization could impact flow-through, the Change Control Team may continue to process a Type 1 change after an interim solution is in place.

4. Receive initial feedback on reported problem and finalized work-around

Who: BA change management organization representatives

When: After Bell Atlantic and/or TC support group change request impact assessment

How: After the Bell Atlantic and/or TC support groups have determined the extent of the Change Request impact and potential work-arounds, this information is communicated to parties involved, as appropriate. The communication may be in the form of email or direct phone contact, depending on the severity of the problem (see Type 1 definition for details on severity) and the nature of the information being communicated.

5. Determines fix and Implementation Date for Problem.

Who: TC support organizations, as appropriate

When: After the work-around has been communicated to BA

How: The TC performs impact analyses and determines the system updated required to rectify the error. The TC must also determine the testing and implementation dates for this change.

6. TC Change Confirmation of Testing Date and Implementation Date.

Who: TC change management organization representatives

When: Directly following determination of system change, and corresponding testing and implementation dates

How: The TC will notify the BA Change Control Manager of the scheduled implementation date of the Change Request. This notification includes carrier-to-carrier testing availability.

7. Development and Testing of CR

Who: TC support groups

When: Prior to implementation of change request

How: The required production discrepancy changes are developed by the TC support groups as soon as development capacity permits. Since the nature of production discrepancy changes is normally one of revising a process or application to make it compliant with a previously defined specification, development times are usually not as great as those associated with implementing newly defined functions or processes.

8. Implementation of CR and Decommission of Outdated Functionality

Who: TC application maintenance organizations

When: Scheduled change request release date

How: The implementation of system changes involving a TC to Bell Atlantic application interface occurs on the scheduled release date. For Type 1 changes, the outdated functionality is also immediately decommissioned, leaving the new error-free release in existence.

9. Carrier-to-Carrier Test

Who: BA and TC support groups, as appropriate

When: Upon Implementation of the change

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How: Prior to the TC releasing their changes into the production environment, the change may be checked via carrier-to-carrier testing, if feasible. This type of testing is meant to mimic as closely as possible the application-to-application interfaces existing in the production environment. The extent to which carrier-to-carrier testing is required is evaluated on a case-by-case basis. However, in the case of Type 1 (Emergency Maintenance) changes, there probably will be extensive carrier-to-carrier testing. This type of change request is by definition a change needed to bring the application-to-application interface into compliance with a previously established set of criteria, which should therefore be well understood by all parties involved. In addition, this type of change generally needs to be placed into production quickly, and the tradeoff inherent in reducing carrier-to-carrier testing is generally outweighed by the accompanying quickness to deployment.

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Bell Atlantic Systems Availability

Application-to-Application Interface Version Availability

Changes to OSS interfaces shared between the TCs and Bell Atlantic, regardless of the reason for the change, raises the issue of version availability. Once a change has been made, two versions of the system exist - one with the change and one without. Since it is impractical for all versions of all systems to remain available perpetually, a procedure must be established whereby old system versions are retired. This section describes Bell Atlantic's policies for making outdated versions of the application-to-application interface infrastructure available for TC use. These policies are based upon the document *Joint CLEC / Bell Atlantic Proposal: Principles of Change Management*, final version January 28, 1998.

When absolutely necessary, a third version of the system may exist. This situation should only occur when there are no other viable alternatives and all parties agree that the need for three concurrent versions should occur only in exceptional circumstances as a brief temporary contingency. Bell Atlantic will work with the TC to determine the appropriate options in such situations.

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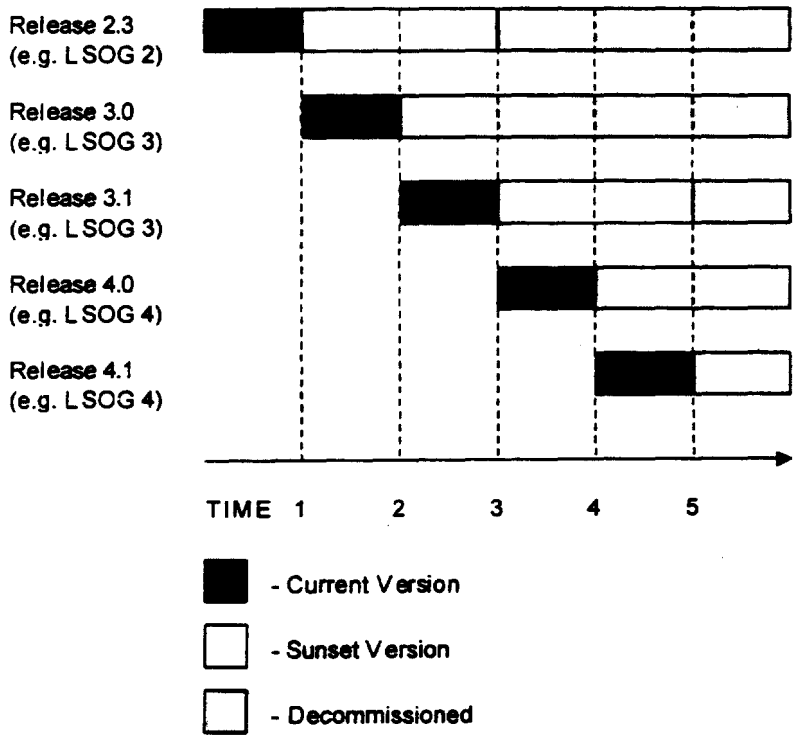
The basis of the Bell Atlantic Application-to-Application Interface version availability policy is to have two Industry Standard versions of the OSS interfaces available. These two versions can be thought of as the current version and the sunset version. The sunset version of the interface is maintained until, but not past, the time when a subsequent Industry Standard version is released into production. At that time, what had been the current version becomes the sunset version and the previous sunset version is simultaneously decommissioned. A Major release introduces a new version. A Minor release (often referred to as a dot release) can impact both versions and will decommission a previous dot release. Only the most recent release of each version will be available. The diagram below depicts this multiple version availability:



The diagram depicts a series of five releases. Initially Release 2.3 is the current version. At time 1, Bell Atlantic implements Release 3.0 into production, at which time Release 2.3 is the sunset version. Later at time 2, another set of enhancements is implemented into production as Release 3.1. With the implementation of Release 3.1, Release 2.3 remains the sunset version and Release 3.0 is decommissioned. At time 3, Release 4.0 is introduced into production and, as a result, Release 2.3 is decommissioned. Release 3.1, the most recent release of the previous Industry Standard version, becomes the sunset

version. When Release 4.1 is implemented at time 4, Release 3.1 continues as the sunset version and Release 4.0 is decommissioned.

This policy affords TCs an extended period of time to upgrade their interface to comply with the next Industry Standard version. This time spans from the initial implementation date of the Industry Standard version to the implementation date of the subsequent Industry Standard version. In the previous example, a TC whose systems are initially compliant with LSOG 2 would be able to upgrade to an LSOG 3 compliant system any time between time 1 and time 3. The Release 2.3 compliant system would not be available after time 3.

Implicit in this arrangement is the decommissioning of the dot release within a version when a Minor release is introduced. It should be noted that Minor releases will be backwards compatible as technically feasible. In the previous example, a TC who is LSOG 3 compliant (via Release 3.0), will need to upgrade to Release 3.1 at time 2. The TC may choose not to bring their systems into compliance with Release 3.1 if the enhancements within Release 3.1 do not affect its methods and procedures, or if the backwards compatibility of Release 3.1 with Release 3.0 encompasses all functionality needed. If however, the upgrade is necessary for the TC to continue interfacing with Bell Atlantic, all development and testing should occur prior to time 2 in order for the TC to migrate to Release 3.1. In the event that a TC is unable to be compliant with Release 3.1, an agreed upon temporary work-around will be determined for a specific timeframe. This work-around will take into account the separate impact to Bell Atlantic's and each of the TC's business processes and systems.

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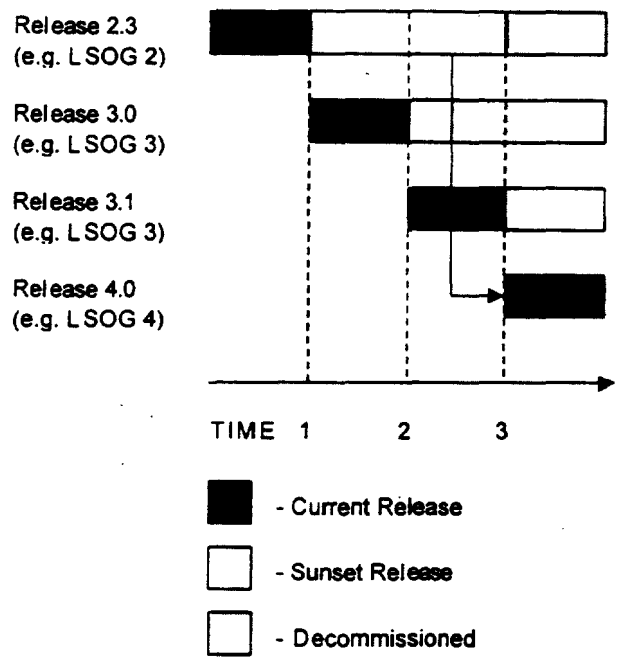
The issue of version availability raises the question of "leapfrogging" versions. To leapfrog a version is to not bring the interfacing software into compliance with the version of the interface, or to not use it. In the diagram below the arrow represents a TC software migration path, showing how a TC could leapfrog from interface Release 2.3 to interface Release 4.0 (skipping release 3.0 and 3.1) at times 1 and 2.



Although leapfrogging from a sunset Major release to a new Major release of an interface is made possible by Bell Atlantic's maintenance of the interface versions, this practice is not recommended. Leapfrogging makes it impossible for a TC to rely upon a previous release, as the release they have "leapt" from will be decommissioned. In certain instances, the only viable alternative for the TC would be to utilize generally available Bell Atlantic provided user interfaces, (e.g. Web GUI). This may not meet the needs of a particular TC if they have, for example, developed customized methods and procedures according to their own design. In the event that a CLEC has made a genuine effort to maintain currency with either the new Major release or sunset Major release (after the new major release is introduced), Bell Atlantic will make available a third release for a very limited period on a contingency basis, not to exceed thirty days.

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Web GUI Version Availability

As an *End User Interface*, issues regarding Change Management and Release Management for the Web GUI go beyond those associated with an Application-to-Application interface. Bell Atlantic will manage changes to the Web GUI in a way that is consistent with the processes for Application-to-Application interfaces where this approach is appropriate. These processes will be extended and clarified for those areas of the Web GUI environment in which the characteristics of the Web technology are better managed by a more pragmatic and flexible approach. Bell Atlantic will work with the CLECs and Resellers to clarify this different approach and seek consensus as to how it will be implemented.

The Web GUI is primarily a window into the OSS gateway transaction systems to which a TC could write its own *End User Interface*. As such, the Web GUI will reflect all changes to transaction formatting and business rules, as do the Application-to-Application interfaces. Thus, one component of the Web GUI can be described as the Transaction Area which would refer to the fields which are presented to the user and the rules governing data entry into these fields. This Transaction Area of the GUI will, with a few exceptions, have a direct match to the inputs and outputs that exist in the Application-to-Application interfaces. This consistency makes the processes and procedures for Change Management to the Web GUI's Transaction Area identical to those for the Application-to-Application interfaces.

The richness of the underlying technology which enables the Web GUI provides both a challenge and an opportunity. Without changing the associated inputs and outputs within the Transaction Area of the Web GUI, there are many changes which could be made to both the content and look and feel of the interface that would enhance utility and ease of use without being disruptive. Such Non-Transaction updates could include changes like adding pull-down menus to a field with multiple inputs or matching the green/yellow/red lights to the order intents within the environment - rather than generalizing the lights to common LSR forms across all order types (e.g., the End User form is used for multiple intents). In these examples, the actual inputs would be unchanged while the interactive capabilities of the environment would be enhanced. The fact that human beings rather than programmatic systems interact with the Web GUI interface further enhances the Web GUI's technological capabilities when accompanied by adequate training.

In the case of disruptive, Non-Transaction Area Web GUI Changes, Bell Atlantic will maintain both the old and the new releases for a reasonable period of time to allow TCs to train personnel and develop methods, as appropriate. During this release overlap period,

the TC will be able to access either the old or new release. It should be noted that these types of enhancements to the Web GUI are infrequent and will follow the Type 4 (Bell Atlantic Originated) Change Management Process, allowing TCs significant notice of impending changes.

When a new Industry Standard version is introduced to the OSSs, the Web GUI will manifest the changes for the Industry Standard in the Transaction Area. Bell Atlantic recognizes that the TC may have significant impacts to their business processes as a result of the new Industry Standard version. To accommodate these needs, Bell Atlantic will offer, to the extent possible, an ability to select which Industry Standard version the TC would like to use. These Industry Standard versions will be the same Industry Standard versions available through the OSSs. This policy for Web GUI Industry Standard version availability parallels the Application-to-Application interface version availability policy.

In the case of non-disruptive, Non-Transaction Area Web GUI changes, Bell Atlantic will only maintain the newest release. Because these types of changes do not alter the business functions and require little or no additional training, there will be minimal impact to Web GUI users. Impending non-disruptive, Non-Transaction Area Web GUI changes will be communicated to the TCs via the Type 4 (Bell Atlantic Originated) Change Management Process prior to their release to production.

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Bell Atlantic OSS Version Availability

In the course of normal business practices, unrelated to its wholesale market offerings, Bell Atlantic will from time to time make changes to its internal Operational Support Systems. These changes can have many drivers. Common examples include the addition of new NPAs, changes to existing products and new retail regulations. Because the application-to-application interfaces TCs use to communicate with Bell Atlantic ultimately interact with the internal OSS infrastructure, occasionally these changes may impact those interfaces. This section describes how Bell Atlantic will work with the TC community to communicate and manage OSS changes.

When Bell Atlantic OSS changes occur, Bell Atlantic will not maintain two distinct versions of its internal OSSs. However, Bell Atlantic will seek to minimize the impact on the TCs which might result from changes to Bell Atlantic's OSSs. To the extent feasible, Bell Atlantic will attempt to utilize the application-to-application interface middleware to isolate TCs from OSS changes. Depending on the nature of the change, however, it may not be feasible for the middleware supporting the application-to-application interface to hide the Bell Atlantic OSS infrastructure changes from the TC community. Changes might be too broad or require business decisions which the automated software could not reliably make on the behalf of TCs. In such cases, Bell Atlantic will be unable to support multiple versions of core Operational Support Systems. In these situations, although release transition will be more prescriptive, Bell Atlantic will provide specifications regarding such OSS changes utilizing the Type 4 (Bell Atlantic Originated) Change Management Process.

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Introduction of New Interface Functionality

In order to meet the business needs of the emerging Wholesale Markets Industry, Bell Atlantic will often introduce new non-impacting interface functionality. It may be introduced as a new systems interface or additional functionality to an existing systems interface. New functionality may also include the implementation of these types of changes in regions that did not previously support the functionality. As such, genuinely new functionality does not, per se, constitute a change to a pre-existing interface. For those instances where development can be accomplished quickly there is a natural trade off between making new functionality available as early as possible or delaying its release in order to satisfy notification intervals. In these situations where the introduction of genuinely new functionality does not impact a pre-existing interface capability, Bell Atlantic reserves the right to implement the new functionality as desired. For example, the introduction of Pre-Ordering in the Bell Atlantic South Web GUI that previously only supported Ordering would be considered new interface functionality. However, Bell Atlantic will seek to conform to the notification process for Type 4 (Bell Atlantic Originated) changes as described in this document. In the event that Bell Atlantic is forced to deviate from the Type 4 (Bell Atlantic Originated) process for new non-impacting interface functionality, Bell Atlantic will notify all TCs of the deviation as promptly as possible.

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Appendix A: Change Control Request Form

As agreed upon in Attachment A of the Principles of Change Management document, the Change Request form should be used both for TCs to describe changes they wish to see to Bell Atlantic OSS interfaces as well as for Bell Atlantic to describe planned changes to TCs. This appendix includes the fields required for a completed form.

Required Fields

Title of Change

High Level Summary of Change

Reason for Change

Timeframe

Detailed Description of Change
A detailed description of the change being requested. This description should include information on how the change differs from the corresponding industry standard.

Jurisdictions Impacted

Regulatory Information

Contact Information

Type & Category of Change
The originator should specify which of the change types, as described in the *Principals of Change Management* document and the definitions section of this document, applies to the submitted change request.

Priority
This field indicates the criticality of the requested modification. High priority changes are ones which are critical to the success of a new or significantly modified business process. Designating a change as High priority indicates that this change should be factored into capacity planning before those of any other priority level. Medium priority is the default status which should be given to almost all change requests. These changes reflect the typical evolution of a business process to improve efficiency or reduce costs. Low priority

changes can be considered enhancements to be implemented as resources are available. Note that *Priority* is not necessarily related to *Timeframe*; a High priority change can be critical to improve a business process but not be expected for several months.

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Appendix B: Industry Change Control Working Groups

Industry Change Control Core Team

Bell Atlantic Team Leader:
TC 1 Representative:
TC 2 Representative:
TC 3 Representative:
...

Industry Change Control Working Groups

Application-to-Application Pre-Order Interface
Bell Atlantic Group Leader:
TC 1 Representative:
TC 2 Representative:
TC 3 Representative:
...

Application-to-Application Order Interface
Bell Atlantic Group Leader:
TC 1 Representative:
TC 2 Representative:
TC 3 Representative:
...

Trouble Administration / Repair
Bell Atlantic Group Leader:
TC 1 Representative:
TC 2 Representative:
TC 3 Representative:
...

Billing
Bell Atlantic Group Leader:
TC 1 Representative:
TC 2 Representative:
TC 3 Representative:
...

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Web GUI
Bell Atlantic Group Leader:
TC 1 Representative:
TC 2 Representative:
TC 3 Representative:
...

Industry Standards
Bell Atlantic Group Leader:
TC 1 Representative:
TC 2 Representative:
TC 3 Representative:
...

[TBD]
Bell Atlantic Group Leader:
TC 1 Representative:
TC 2 Representative:
TC 3 Representative:
...

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OBJECTIVE

The Type 1 Severity 1 Change Process defines the actions that will be taken by Bell Atlantic for a Type 1 (Emergency Maintenance) Change resulting in a Severity 1 (Interface Unusable). The objective of implementing an effective Type 1 Severity 1 Change Process is to return the TC to an acceptable operational mode in an expeditious fashion. All Type 1 Severity 1 Changes reported through this process will be handled as promptly as possible and an audit trail of all problems and resolutions will be maintained.

It is the responsibility of the TIS Help Desk to ensure that the Type 1 Severity 1 Change is corrected or cleared in a timely manner and that the correct level of technical expertise is working on an immediate solution. Additionally, the TIS Help Desk ensures that all appropriate escalations are initiated.

DEFINITIONS

Below is the Type 1 (Emergency Maintenance) Change definition as it appears on pages 7 and 8 of the TIS Change Management Process Document.

Type 1 (Emergency Maintenance) Change
A Type 1 change corrects problems discovered in production versions of an application interface. Either Bell Atlantic or the TC may initiate the change request. Typically, this type of change reflects instances where a technical implementation is faulty or inaccurate, such as to cause incorrect or improperly formatted data. Instances where Bell Atlantic or TCs misinterpret interface specifications and/or business rules must be addressed on a case-by-case basis. All parties will take all reasonable steps to ensure that any disagreements regarding the interpretation of a new or modified business process are identified and resolved during Change Management Review of the Change Request. All known discrepancies should be resolved prior to the release of new application code into the production environment. Type 1 changes will be processed on an expedited basis. The timeframe for a Type 1 change is typically hours or days.

Additionally, once a Type 1 change is identified, the Change Management Team must determine the nature and scope of the emergency. Type 1 changes should be categorized in the following manner:

Severity 1: Interface Unusable - Interface discrepancy results in totally unusable interface. TC Orders/Pre-Orders/Maintenance Requests cannot be submitted or will not be accepted by Bell Atlantic or a TC. Manual work-arounds are not feasible. Change is considered essential to continued operation. Bell Atlantic and TCs should work to resolve the discrepancy as quickly as possible.

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Bell Atlantic and TCs agree that a process will be developed for handling Type 1 Severity 1 situations. Bell Atlantic will create a proposal for this process and distribute it to the TCs prior to Friday May 29, 1998, addressing any TC input provided by May 22, 1998. Bell Atlantic and the TCs agree to reach consensus on the proposal no later than the June 1998 *Industry Change Control Meeting*.

Severity 2: Interface Affecting - Orders/Pre-Orders/Maintenance Requests require work-around on the part of Bell Atlantic or TC(s). Change is considered critical to operations. Bell Atlantic and TCs should work to resolve the discrepancy in a timely manner.

Severity 3: Process Impacting - Orders/Pre-Orders/Maintenance Requests can be submitted and will be accepted through normal process/interfaces. Clarification is considered critical to ongoing operations. Bell Atlantic should work to provide appropriate documentation on an expedited basis.

TYPE 1 SEVERITY 1 CHANGE PROCESS DESCRIPTION

The Type 1 Severity 1 Change Process is described below and depicted in Figure 1.

Stage 1 - Change Discovery

1.1 Change Identified

A Type 1 Severity 1 problem requiring a change to the Bell Atlantic or TC systems can be reported by either Bell Atlantic or the TC(s).

1.2 Record Information and Initial Evaluation

Following a report to the TIS Help Desk, an investigation begins to confirm the nature of the change and determine the routing for resolution. Bell Atlantic includes the following information in the trouble ticket:

- Time determined that problem requires change
- Description of change
- Impact of change on TC
- Action taken
- Referral group
- Escalation information
- Severity of change

1.3 Status Information

Each TC will identify the point(s) of contact with whom Bell Atlantic should communicate for the Type 1 Severity 1 Change Process. No more than three contacts should be designated per TC. Bell Atlantic will create a broadcast message and send electronic mail

to the previously established contact(s) for each TC within 1 hour. The broadcast message will include a description of the problem, change required, any immediate feedback on the change and current status. Whether the Type 1 Severity 1 Change is discovered by Bell Atlantic or the TC(s), Bell Atlantic will notify the contact(s) for each TC.

Stage 2 - Change Isolation

2.1 Assessment of Change
The TIS Help Desk will refer the change to the appropriate Bell Atlantic personnel. The Support personnel will continue investigating the change and follow the Type 1 Severity 1 Change Process until the resolution for the change is determined.

2.2 Determine Mutually Agreed Upon Work-Arounds, if any
According to the Type 1 Severity 1 definition, work-arounds are not feasible. However, Bell Atlantic may be able to implement a temporary work-around solution until the originating problem can be corrected. All such solutions will be determined on a case-by-case basis between the TC and Bell Atlantic. The TIS Help Desk will initiate and coordinate the change until the TC regains full functionality.

If work-arounds are agreed upon, Type 1 Severity 1 Change becomes a Type 1 Severity 2 Change and will no longer follow the Type 1 Severity 1 Change Process. According to the Type 1 (Emergency Maintenance) Severity 2 Change definition above, change is considered critical to operations. Bell Atlantic and TCs should work to resolve the discrepancy in a timely manner.

2.3 Determine Expected Resolution
The TIS Help Desk is responsible for contacting all involved support groups and coordinating the resolution process. The Bell Atlantic support groups and TC(s) work together, as appropriate, to determine the resolution to the Type 1 Severity 1 Change.

2.4 Update Broadcast Message
Once the change has been isolated (or within 4 business hours of the initial broadcast message), Bell Atlantic will update the broadcast message and the contact(s) for each TC with any new information.

Stage 3 - Change Resolution

3.1 Cycle of Regular Updates
Bell Atlantic continues the same process as Change Isolation. A broadcast message will be used to provide status on Type 1 Severity 1 Changes while they are being resolved. The broadcast message will be updated every two business hours or less until Type 1 Severity 1 Change is resolved. The TIS Help Desk will initiate and coordinate the Type 1 Severity 1 Change until the TC regains full functionality. Whether the Type 1 Severity 1 Change is

discovered by Bell Atlantic or a TC, Bell Atlantic will notify the identified contact(s) for each TC.

3.2 Recovery of Lost Orders

Bell Atlantic and the TCs will work to handle any lost orders due to the Type 1 Severity 1 Change, as appropriate. The TCs should directly contact the Bell Atlantic Area Operations Manager to discover and resolve any lost orders.

3.3 Type 1 Severity 1 Change Resolved

The Type 1 Severity 1 Change Process is complete once the resolution has been successfully implemented. The TIS Help Desk is responsible for ensuring that the Type 1 Severity 1 Change Process is followed effectively and that all outstanding referrals are escalated as necessary.

3.4 Change Documentation

Once the Type 1 Severity 1 Change has been resolved, it is the responsibility of the TIS Help Desk to update the trouble ticket for tracking and management purposes. All Type 1 Severity 1 Changes should be updated with the following information:

- Remedial action taken
- Root Cause
- Resolution
- Supporting documentation (and communication)

This information will be distributed via electronic mail to the contact(s) for each TC. Additionally, Bell Atlantic will update the Bell Atlantic systems documentation and business rules to reflect the change implemented and distribute the updates at the next *Industry Change Control Meeting.*

Type 1 Severity 1 Change Escalation Process

If the proper notification process does not occur, the following escalation process may be used.

Bell Atlantic Escalation Process for Type 1 Severity 1 Changes

- The TIS Help Desk has 1 business hour to involve the necessary support groups to evaluate the identified change. Upon completion of the initial evaluation of the change, the TIS Help Desk should notify the TC of the need for a Type 1 Severity 1 Change and any additional associated information available. If the TC is not notified at the end of 1 business hour, the TC can request an escalation to the first level TIS Help Desk Manager indicating that they have not received the expected notification associated with a Type 1 Severity 1 Change.
- Once the first level manager has been notified of the escalation, he/she has 4 business hours to assess the change, determine the expected resolution and identify a work-around, if any. This information will be communicated to the TCs within 4 business hours or less following the procedures outlined above.

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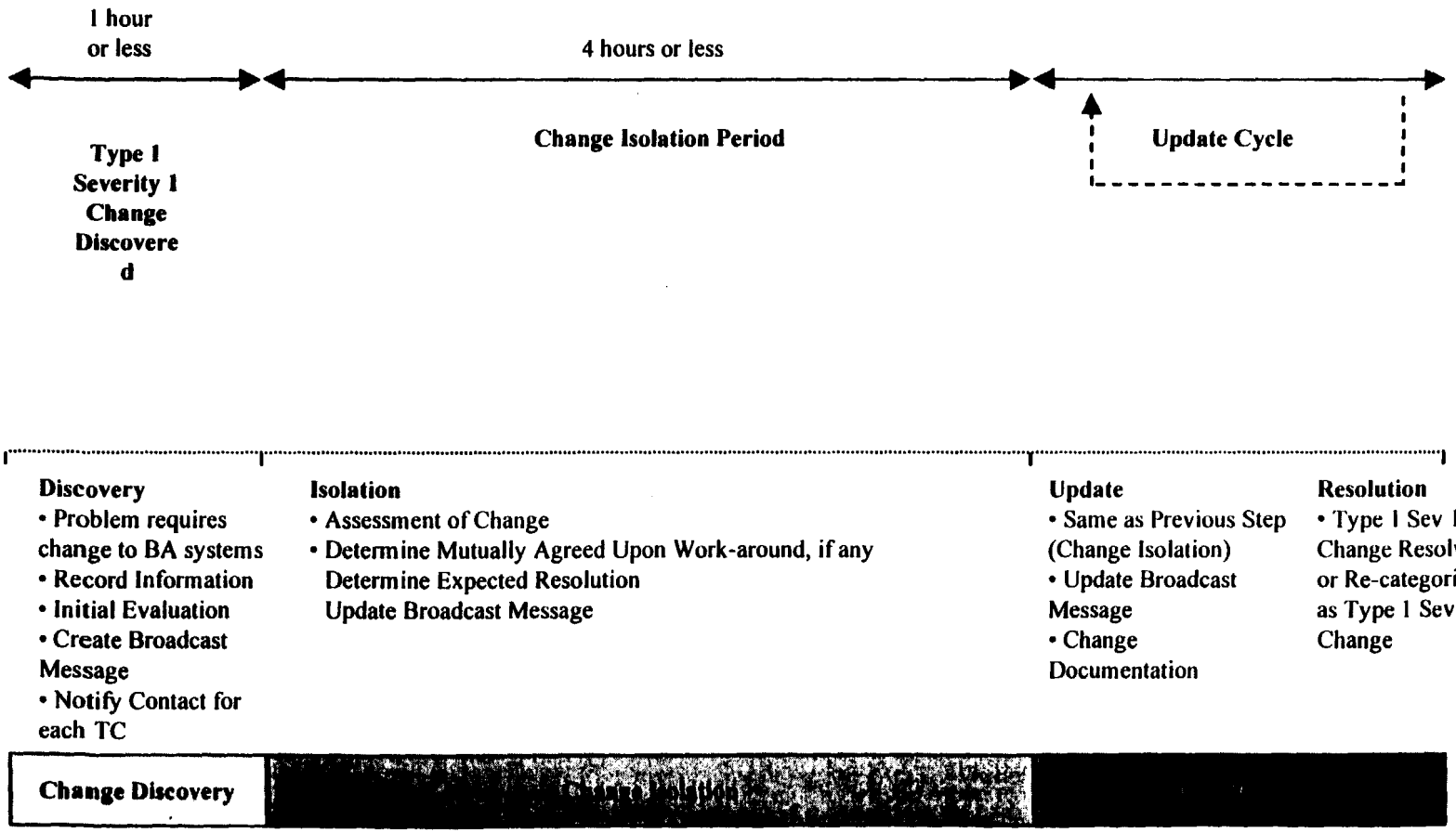
- After the expiration of the 4 business hour time period, the TC can either escalate to the second level TISOC Operations Manager if they have not received the previously indicated communication. At this point, the TISOC Operations Manager may involve additional support groups and/or increase the priority of the change, as appropriate.
- If by the next business day the change is still unresolved, it is then referred to the Director. It is at the discretion of the TC to escalate up through the different management levels at Bell Atlantic in accordance with the notification intervals identified in this document.

Figure 1

Timeline for a Type 1 Severity 1 Change



Change Discovery - Either Bell Atlantic or TC(s) can discover Type 1 Severity 1 Change
Change Isolation - Bell Atlantic and TC(s) determine cause of the Type 1 Severity 1 Change
Change Resolution - Update broadcast message every two hours or less until Type 1 Severity 1 Change resolved